

7. REGULATIONS AND ADVISORIES

The international, national, and state regulations and guidelines regarding diazinon in air, water, and other media are summarized in Table 7- 1.

ATSDR has derived an intermediate-duration inhalation MRL of 0.009 mg/m³ for diazinon based on brain acetylcholinesterase inhibition in rats Hartman (1990).

ATSDR has derived an intermediate-duration oral MRL of 0.0002 mg/kg/day for diazinon based on brain acetylcholinesterase inhibition in offspring of mice maternally exposed to diazinon during gestation (Barnes 1988).

The reference dose for diazinon is undergoing review by an EPA Workgroup. No reference concentration exists for the compound.

Diazinon has no cancer classification under the International Agency for Research on Cancer (IARC), the U.S. Environmental Protection Agency, or the National Toxicology Program (NTP).

Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), food tolerance restrictions for diazinon range from 0.1 to 60 ppm (EPA 1982).

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Table 7-1. Regulations and Guidelines Applicable to Diazinon

Agency	Description	Information	Reference
<u>INTERNATIONAL</u>			
WHO		NA	
IARC	Group (cancer ranking)	NA	
<u>NATIONAL</u>			
Regulations:			
a. Water:			
EPA/OW	Designation of Hazardous Substances	Yes	40 CFR 116.4 EPA 1978a
	Reportable Quantities of Hazardous Substances: Section 311 of Clean Water Act	1 lb.	40 CFR 117.3 EPA 1979a
	Appendix D - NPDES Permit Application Testing Requirements (122.21)	Yes	40 CFR 122 EPA 1983
	Form 2D	Yes	40 CFR 122 EPA 1983
	Instructions - Form 2c	NA	40 CFR 125 EPA 1979b
	Identification of Test Procedures	Yes	40 CFR 136.3 EPA 1973
b. Food:			
EPA/OPTS	Tolerance Range for Agriculture Products	0.1 - 60 ppm	40 CFR 180.153 EPA 1971
e. Other:			
EPA/OERR	Reportable Quantity	1 lb.	40 CFR 302.4 EPA 1985a
EPA/OPTS	Food Additives Permitted in Food for Human Consumption: Diazinon in Food Handling Establishments - Application Specs.	Yes	40 CFR 185.1750 EPA 1982
	Feed Additives Permitted in Animal Feed: Diazinon in Feed Handling Establishments - Application Specs.	Yes	40 CFR 186.1750 EPA 1982

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Table 7-1. Regulations and Guidelines Applicable to Diazinon (Continued)

Agency	Description	Information	Reference
<u>NATIONAL</u> (cont.)			
	Applicability; Description of the Organic Pesticide Chemicals Manufacturing Subcategory	Yes	40 CFR 455.20 EPA 1978b
Guidelines:			
a. Air:			
ACGIH	Ceiling limit for Occupational Exposure (TLV-TWA)	0.1 mg/m ³ (8.0x10 ⁻³ ppm) (skin)	ACGIH 1996
NIOSH	Recommended Exposure Limit for Occupational Exposure (TWA)	0.1 mg/m ³ (8.0x10 ⁻³ ppm) (skin)	NIOSH 1992
b. Water:			
EPA	1-d Health Advisory (child & adult)	0.02 mg/L (child)	EPA 1995
	10-d Health Advisory (child & adult)	0.02 mg/L (child)	EPA 1995
	Lifetime Health Advisory (child & adult)	0.0006 mg/L (adult)	EPA 1995
	Longer-term Health Advisory (child & adult)	0.005 mg/L (child) 0.02 mg/L (adult)	EPA 1995 EPA 1995
c. Other:			
EPA	Cancer classification	NA	
NTP	Cancer classification	NA	
<u>STATE</u>			
Regulations and Guidelines			
a. Air:			
	Acceptable Ambient Air Concentration Guidelines or Standards		NATICH 1992
AZ	1 hr avg. time	2.40 µg/m ³ (1.98x10 ⁻⁴ ppm)	
	24 hr avg. time	8.00 µg/m ³ (6.43x10 ⁻⁵ ppm)	

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Table 7-1. Regulations and Guidelines Applicable to Diazinon (Continued)

Agency	Description	Information	Reference
<u>STATE</u> (Cont.)			
CT	8 hr avg. time	2.00 $\mu\text{g}/\text{m}^3$ (1.61×10^{-7} ppm)	
FL-PINELLA	8 hr avg. time	1.00 $\mu\text{g}/\text{m}^3$ (8.03×10^{-5} ppm)	
	24 hr avg. time	2.40×10^{-1} $\mu\text{g}/\text{m}^3$ (1.93×10^{-5} ppm)	
ND	8 hr avg. time	1.00×10^{-3} mg/m^3 (8.03×10^{-8} ppm)	
NV	8 hr avg. time	2.00×10^{-3} mg/m^3 (1.61×10^{-7} ppm)	
TX	30 min avg. time	1.00 $\mu\text{g}/\text{m}^3$ (8.03×10^{-5} ppm)	
	Annual avg. time	1.00×10^{-1} $\mu\text{g}/\text{m}^3$ (8.03×10^{-6} ppm)	
VA	24 hr avg. time	1.70 $\mu\text{g}/\text{m}^3$ (1.37×10^{-4} ppm)	
WA-SWEST	24 hr avg. time	3.00×10^{-1} $\mu\text{g}/\text{m}^3$ (2.41×10^{-5} ppm)	
b. Water:			
Water Quality: Human Health			
AZ	Drinking water guideline	0.63 $\mu\text{g}/\text{L}$	FSTRAC 1990
CA	Drinking water guideline	14 $\mu\text{g}/\text{L}$	
FL	Domestic/Drinking water	10 $\mu\text{g}/\text{L}$	Sittig 1994
KS	Drinking water guideline	0.63 $\mu\text{g}/\text{L}$	FSTRAC 1990
ME	Drinking water guideline	0.63 $\mu\text{g}/\text{L}$	
MI	Domestic/Drinking water	0.63 $\mu\text{g}/\text{L}$	Sittig 1994
MN	Drinking water guideline	0.6 $\mu\text{g}/\text{L}$	FSTRAC 1990
NY	Domestic/Drinking water	0.7 $\mu\text{g}/\text{L}$	Sittig 1994

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Table 7-1. Regulations and Guidelines Applicable to Diazinon (Continued)

Agency	Description	Information	Reference
RI	Drinking water guideline	0.6 µg/L	FSTRAC 1990
VT	Drinking water standard	0.63 µg/L	
STATE (Cont.)			
OH	Water Quality: Aquatic Life		CELDS 1993
	Exceptional, modified, & seasonal warmwater; outside mixing zone; 30-d avg.	0.009 µg/L	
	Coldwater & limited resource warmwater; outside mixing zone; 30-d avg.	0.009 µg/L	
NY	Groundwater Quality Standards	0.7 µg/L (Class GA)	CELDS 1993

NOTE: Update of drinking water guidelines and other areas in progress.

Units in table reflect values and units of measure designated by each agency in its regulations or advisories.

ACGIH = American Conference of Governmental and Industrial Hygienists; CELDs = Computer-aided Environmental Legislative Database; CFR = Code of Federal Regulations; EPA = Environmental Protection Agency; FSTRAC = Federal State Toxicology and Regulatory Alliance Committee; IARC = International Agency for Research on Cancer; LDR = Land Disposal Restriction; NA = Not available at the present time; NATICH = National Air Toxics Information Clearinghouse; NIOSH = National Institute of Occupational Safety and Health; NPDES = National Pollution Discharge Elimination System; NTP = National Toxicology Program; OERR = Office of Emergency and Remedial Response; OPTS = Office of Pesticides and Toxic Substances; OSHA = Occupational Safety and Health Administration; OW = Office of Water; TLV = Threshold Limit Value; TW A = Time Weighted Average; WHO = World Health Organization

